REMARKS

Claims 1-8, and 11, all of the pending claims in this application, are rejected in the Office Action dated September 11, 2007. Applicants, in a separate paper, submit herewith a supplemental information disclosure statement (IDS), directing the Examiner's attention to co-pending applications US Application Serial No.: 10/482,707 and US Application Serial No.: 10/540,336. Applicants respectfully request reconsideration of the claims in view of the following remarks.

Claims are Enabled.

Claim 11 is rejected under 35 U.S.C. §112, first paragraph, because, according to the Examiner, the specification, while enabling for inhibition of FSH receptor activity and the corresponding decrease in fertility, does not reasonably provide enablement for modulation of FSH receptor activity or regulation of fertility. The Examiner thus asserts that the specification does not enable a person skilled in the art to which it pertains, or with which it is most nearly connected, to practice the invention commensurate in scope with the pending claims. The Examiner concludes that the claims taken together with the specification imply that by administering the composition of claim 8, the skilled artisan can increase or decrease FSH receptor activity and increase or decrease fertility. According to the Examiner the specification has provided guidance for antagonism of FSH with the claimed compounds on page 40, example 44 but does not provide guidance for how to use the claimed compounds as FSH agonists.

In response applicants submit that in contrast to the Examiner's assertion, example 44 on page 40 provides guidance for both agonistic as well as antagonistic activity. In fact, the specification provides in Example 44 that "[c]ompounds of all examples exhibited an EC_{50} (IC_{50}) value of less than 10^{-5}M in either an agonistic or an antagonistic assay set-up or both. The compounds of examples 3, 4, 7, 10-13, 16, 36, 37, 39, 41 and 42 showed an EC_{50} (IC_{50}) of less than 10^{-7}M in at least one of the assays." Further, the specification provides in Example 44 methods of determining the activity (whether it be as an agonist or antagonist) for each of the disclosed

examples. As described, activity (with respect to the FSH receptor) of compounds of formula I was measured with a cAMP responsive element/promoter directing the expression of a reporter gene (luciferase), binding of a ligand (compound) to the FSH receptor will result in an increase (for an agonist) of cAMP and therefore increased expression of the reporter gene. Thus this description in Example 44 clearly also describes determining agonistic properties of the claimed compounds, the description of another assay describes testing their antagonistic properties. Moreover, the specification on page 16, line 17 to page 18, line 16 provides further guidance for determining either agonistic activity or antagonistic activity. In particular the assays and results shown in Example 44 are also discussed on page 17, line 22 to page 18, line 16, describing the same assays using a reporter gene detecting the cAMP levels when determining both agonist activity and/or antagonist activity.

Thus, applicants submit that the claimed tetrahydroquinoline derivates of formula I are shown to be ligands (either as agonist or antagonist) for the FSH receptor, as demonstrated in Example 44 of the specification of the currently pending application. The assay determining efficacy of the claimed tetrahydroquinoline derivatives as either an agonist or antagonist for the FSH receptor relies on cAMP accumulation. Activation of the FSH receptor with FSH has previously been correlated with cAMP accumulation. Further, FSH receptor activation with FSH is a well described pathway in regulating fertility. Thus, applicants submit there is a clear nexus between the observed activity of the claimed tetrahydroquinoline derivatives of formula I and a method of regulating fertility. For these reasons, Applicants submit that the specification provides an enabling disclosure for the claimed tetrahydroquinoline derivatives of formula I describing a method for determining as well as showing either inhibition or activation of the FSH receptor activity and thereby also the corresponding decrease and increase in fertility. Thus, Applicants submit that the skilled artisan reading the disclosure of the currently pending application would know how to make and/or use the claimed invention of claim 11, providing an enabling disclosure to the skilled artisan for the modulation of the FSH receptor or regulation of fertility. Accordingly, Applicants submit that claim 11 is clearly enabled by the specification as filed and respectfully request withdrawal of the rejection of claim 11 under 35 U.S.C. §112, first paragraph.

Double Patenting Rejection.

Claims 1-8, and 11 are provisionally rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over claims 1, 2, 9, 13, and 16 of co-pending application 10/540,336. According to the Examiner, although the wording of these allegedly conflicting claims is not identical they are not patentably distinct because the claims in each application are drawn to substantially similar genera of compounds. According to the Examiner, when R^4 and R^5 are each H and R^3 is not H or hydroxyl in co-pending application 10/540,336, claim 1 is drawn to the same genus of compounds as claim 1 in the present application.

In response to the obviousness-type double patenting rejection of claims 1-8, and 11 over claims 1, 2, 9, 13, and 16 of co-pending application 10/540,336 ("the '336 application"), Applicants submit that the claimed tetrahydroquinoline derivatives of formula I are very different from the compounds in claims 1, 2, 9, 13, and 16 of the co-pending '336 application and are not drawn to the same genus of compounds as asserted by the Examiner. In the '336 application as currently pending R^5 cannot be H, and therefore R^4 and R^5 cannot be both H as is required in the currently claimed invention. Thus, in the currently claimed invention the tetrahydroquinoline derivatives of formula I require that **neither one** of the positions 5 and 7 of the benzene ring of the bicyclic tetrahydroquinoline is substituted, whereas the compounds in the '336 require at least **one** substituent on any one of positions 5 and 7 of the same benzene ring. There is no teaching or suggestion in the '336 application that the 5 and 7 positions of the benzene ring of the tetrahydroquinoline compound disclosed therein can be **unsubstituted** as in the claimed invention. Accordingly, Applicants submit that, in contrast to the Examiner's assertions, the compounds in claims 1, 2, 9, 13, and 16 of the co-pending '336 application are not drawn to the same genus of compounds presently claimed, let alone that the disclosure in the '336 application teaches or suggests the claimed tetrahydroquinoline derivatives. For this reason Applicants respectfully request withdrawal of the provisional rejection of claims 1-8 and 11 under the non-statutory doctrine of obviousness type double patenting.

In view of the above amendment, Applicants believes the pending application is in condition for allowance. If the Examiner believes a telephone conference would be of value, he is requested to call the undersigned at the number listed below. Applicants respectfully request the issuance of a timely Notice of Allowance in the case.

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Respectfully submitted,

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